Docket No. AB-117U1

Amendments to the Specification

- Please replace paragraph [0001] with the following amended paragraph:

[0001] The present application is a Divisional of U.S. Application Serial Number 09/866,096, filed May 25, 2001, now issued as U.S. Patent Number 6,728,578; which claims the benefit of U.S. Provisional Application Serial No. 60/208,627, filed June 01, 2000, which applications and patent are incorporated herein by reference.

- Please replace paragraph **[0027]** with the following amended paragraph:

[0027] A functional flow for a single channel of prior-art amplitude mapping is shown in FIG. 2. In known systems, there may be from 4 to 30 such parallel channels operating in different frequency bands. The microphone 12 provides an electrical signals to a bandpass filters 32. The bandpass filter 32 process the electrical signal 30 to generate a filtered signal 34. The filtered signal 34 is then processed by a mapper 36 which outputs the mapped signal 38. The mapper 36 maps the electrical signal [[36]] 30 level measured by the microphone 12 into an electrical stimulation level to be provided to the electrode array 28. In a preferred embodiment the mapper 36 is a log mapper, reflecting normal human hearing. Those skilled in the are will recognize that other mapping may produce similar results and those other mappings are withing the scope of the present invention. The mapped signal 38 is processed by output processing 40 which outputs the stimulation signal 42 which is provided to the electrode array 28. The log mapper 36 operates on every signal processed by the amplitude mapping.

- Please replace paragraph **[0033]** with the following amended paragraph:

[0033] Continuing with FIG. 4, the decimated signal 66 is processed by a third envelope detector 68 to obtain a third envelope signal 70, and the envelope signal 70 is processed by a third decimator 72 to obtain a third decimated signal 74. A preferred envelope detector [[70]] 68 comprises a full wave rectifier and a low pass filter. The lowpass filter has a cut off frequency of about 40 Hz to 100Hz, preferably 40 Hz. While the envelope detector and decimator are shown

as separate processing steps, in a preferred implementation, the lowpass filter and decimator are combined into a single Finite Impulse Response (FIR) filter.

- Please replace paragraph **[0037]** with the following amended paragraph:

[0037] The decimated signal 98 is processed by the log mapper 52 to generate a [[fifth]] third mapped signal 102. The mapped signal 102 and the decimated signal 90 are provided to the multiplier 80, resulting in a third output signal [[102]] 104, which output signal [[102]] 104 is provided to a pulse generator. One output signal [[102]] 104 is provided for each pulse in CIS processing. The decimated signal 90 is at a higher data rate than the mapped signal 102. In a preferred embodiment, the mapped signal 102 is interpolated to the data rate of the decimated signal 90 in the multiplier 80.